

# **Multi-Mission Satellite Receiving Capabilities**

# Agenda

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- Overview of current and planned systems
  - Landsat missions
  - MODIS - Terra and Aqua
- Multi-Mission operations at the EROS Data Center (EDC)
- Potential new missions



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# Current and Planned Systems

## ■ Landsat

- 10m Datron 3-axis antenna
- S-Band T&C
- Three-Channel X-Band D/L with multimode demods
- Landsat 7 primary mission, Landsat 5 secondary

## ■ MODIS

- 5.4m ViaSAT/SA X-Y antenna
- S-Band T&C
- Single-Channel X-Band D/L with multimode demod
  - Growth capacity to dual D/Ls
- MODIS DBS reception from Terra and Aqua primary mission

## ■ Norman, Oklahoma Landsat 5 antenna

- 10m SA/ViaSAT Az-El antenna



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# Site Layout



# Multi-Mission Operations

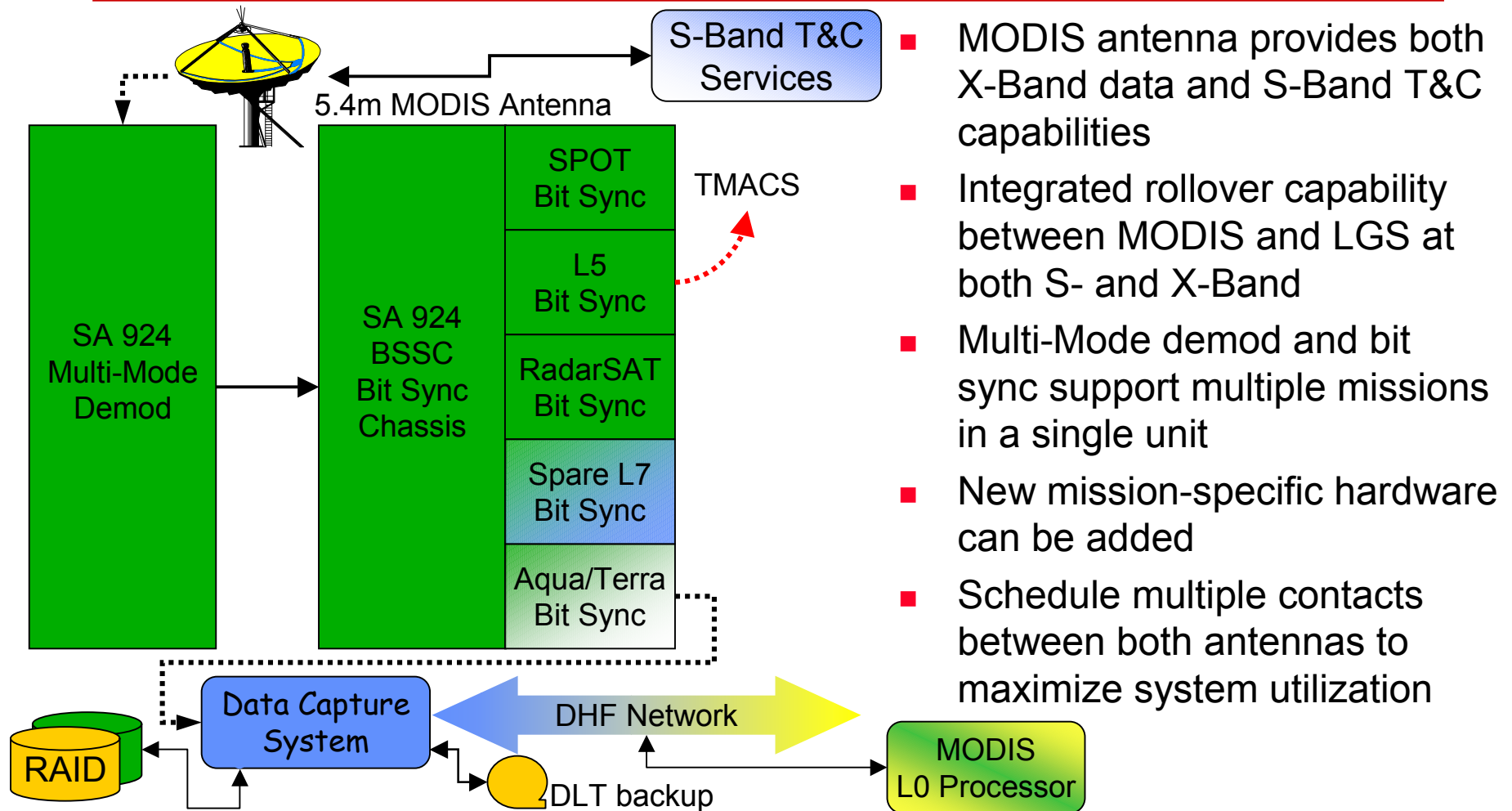
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- Baseline operations designed for two antennas supporting multiple missions (3 or more)
  - Facilities growth designed for second 10m-class antenna
  - Data processing/archiving architecture easily supports additional missions
- Additional missions handled as deltas to baseline operations and equipment
  - Multiple contacts scheduled between all antennas to maximize system utilization
  - Mission Management Office performs arbitration of resource contention
- Common Data Handling Facility (DHF) operations and support organization
  - Operators cross-trained to support all missions
  - Sustaining engineering supports all missions
- Satellite control activities planned as future growth path
  - Landsat 5 mission operations
  - EO-1 flight operations





# Multi-Mission Processing Approach



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# On the Horizon...

- New and Potential Opportunities...
  - Advanced Land Observation Satellite (ALOS)
    - MODIS via EOS/DAAC and MODIS direct broadcast
  - Aqua/PM-1
    - MODIS via EOS/DAAC and MODIS direct broadcast
  - ASTER CONUS direct readout D/L
  - EO-1
    - EDC reception capability demonstration January 2001
    - Extended support after baseline mission is over
  - Landsat 5 transition
    - Satellite operations started July 2001
  - RadarSAT
    - Potential for CONUS downlink site
  - SPOT
    - Potential for CONUS downlink site

